SOUND LEVEL CALIBRATOR

DVM1356

INSTRUCTION MANUAL

HANDLEIDING

MANUEL D'UTILISATEUR

SAFETY INFORMATION

- Read the following safety information carefully before attempting to operate or service the calibrator.
- Use the meter only as specified in this manual ; otherwise the protection provided by the meter may be impaired.
- The Sound-level calibrator is useful to calibrate a sound-measuring instrument.
- Environment conditions
  ① Altitude up to 2000 meters
  ② Relatively humidity 90% max.
  ③ Operation ambient temperature : 0 ~ 40°C
- Maintenance & cleaning
  ① Repairs or servicing not covered in this manual should only be performed by qualified personnel.
  ② Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instruments.
- Safety symbols
  CE Complies with EMC

FEATURES

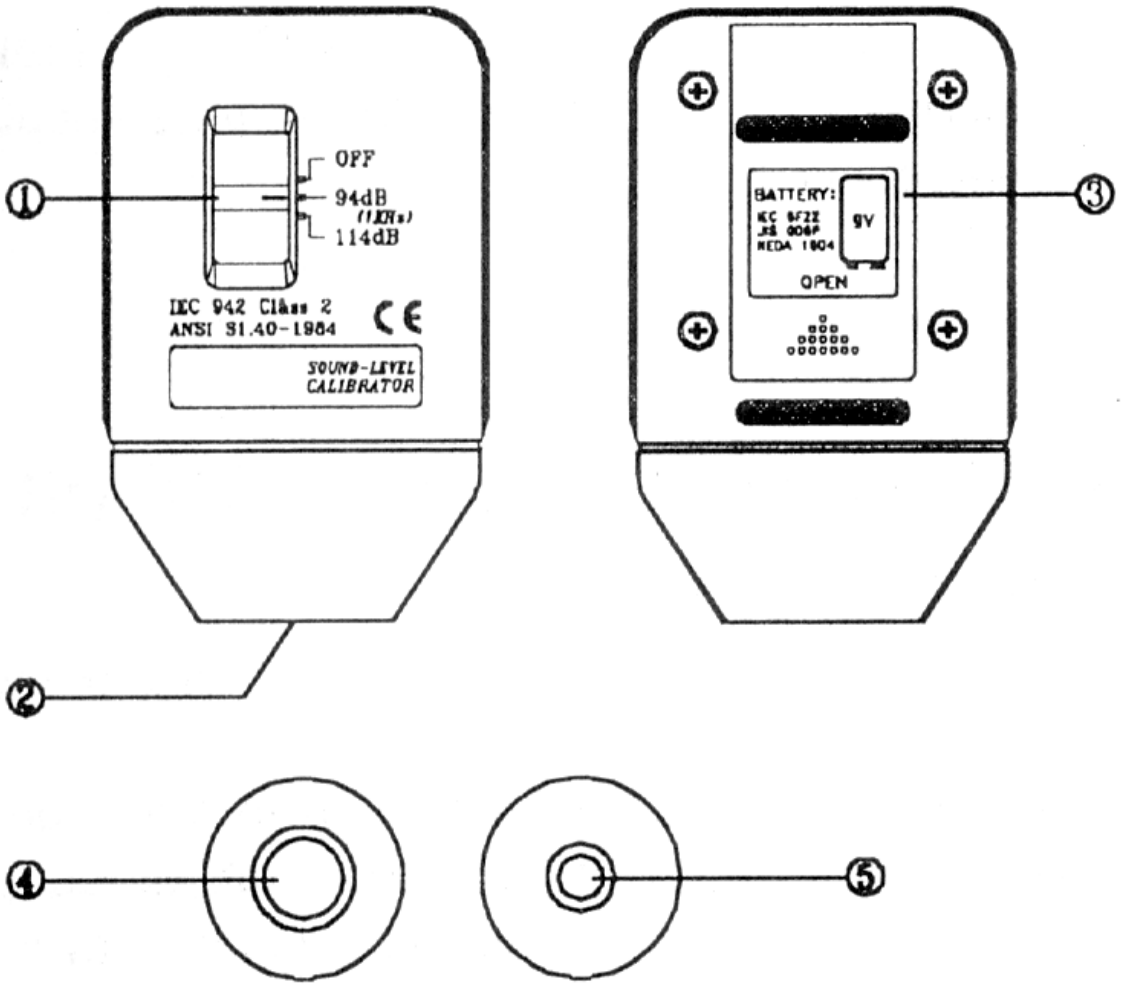
- Conforms to ANSI S1.40-1984 and IEC942 1988 Class 2.
- Calibration levels of 94dB and 114dB.
- Fits 1", 1/2" and 1/4" diameter microphone.

SPECIFICATIONS

- Output sound-pressure levels :
  114dB and 94dB re 220µPa under reference conditions.
- Output frequency : 1000Hz ± 4%
- Reference conditions :
  ① Temperature : 20°C (68°F)
  ② Relative humidity : 65%
  ③ Atmospheric pressure : 1013hPa
- Temperature coefficient : ± 0.015dB/°C
- Total harmonic distortion : <3%
- Accuracy of sound-pressure levels :
  Under stated reference environment conditions : ± 0.5dB
- Power : 1 x 9V battery
- Battery life : approx. 100 hours (with alkaline battery)
- Battery test :
  Internal circuitry checks condition of battery continuously. Calibrator will not operate at all if battery voltage falls below acceptable range.
- Dimensions : 103(L) x 63(W) x 54(H)mm
- Weight : approx. 200g (including battery)
- Operating temperature & humidity :
  0 ~ 40°C (32 to 104°F), 10 ~ 90% RH
- Storage temperature & humidity :
  -10 ~ 60°C (14 to 140°F), 10 ~ 70% RH
- Accessories :
  Instruction manual, carrying case, 9V battery, 1/2" and 1/4", microphone adapter.

NOMENCLATURE AND FUNCTIONS

① Power and output level selection switch.
② Transducer assembly 1-inch cavity for microphone insertion.
③ Battery cover.
④ 1/2-inch microphone adapter
⑤ 1/4-inch microphone adapter



PREPARING FOR OPERATION

(1) Remove battery cover and install a 9-Volt battery in the battery compartment.
(2) To quickly check the operation of the Sound level Calibrator before using it, proceed as follows :
   (a) Turn the power switch from OFF to the 94dB position and listen for a 1000Hz audible tone. This indicates that the instrument is working. If no tone is evident, the battery may need replacing.
   (b) Change the switch from 94dB to 114dB, the 20dB increase in level of the 1000Hz tone should be easy to hear.

CALIBRATION OF SOUND-MEASURING INSTRUMENTS

(1) The cavity of the calibrator will accommodate a 1-inch microphone.
(2) When the calibration is performed on an instrument with a 1/2-inch microphone, the 1/2-inch microphone adapter will have to be inserted by gently pushing it completely into the cavity.
(3) When calibration is performed on the instrument with a 1/4-inch microphone, remove the 1/2-inch microphone adapter. The 1/4-inch microphone adapter has to be inserted for the transducer assembly of calibrator.
(4) Insert the proper adapter, if one is required, in the cavity of the Sound-level calibrator to fit the particular microphone under calibration.
(5) Set the Sound-level calibrator power switch to the 94dB or 114dB position, depending on the desired level of calibration. (Select the level closest to the upper limit of the level range intended for measurement.)

(6) Place the Sound-level calibrator over the microphone of the sound-measuring instrument being calibrated.
(7) Set the LEVEL RANGE control on the instrument being tested to the range with 100dB as its upper limit if 94dB was selected on the Sound-level calibrator. If 114dB was selected on the Sound-level calibrator, choose a range with an upper limit of 120dB. The instrument may be set to FAST or SLOW response and C or A weighting.
(8) Read the level on the instrument being tested and adjust the sensitivity control for the correct indication of the Sound-level calibrator level selected in step.
(9) When the calibrator is not in use, please switch it OFF to save the battery.

CAUTION
Ambient sources of noise or vibration can cause a false calibration indication, this can be especially significant at the lower 84dBA level.